Claims:

1. A method for transmitting an encryption number in a communication system (1) comprising mobile terminals (MT1—MT4) and at least a first access point (AP1) and a second access point (AP2), the method comprising the steps of:

— defining a set of encryption keys,

— selecting at each said access point (AP1, AP2) from said set of encryption keys one to be used at a time for encrypting information to be transmitted between said access point (AP1, AP2) and mobile terminal (MT1—MT4),

— transmitting from the access point (AP1, AP2), at intervals, data about the encryption key selected at the time,

— setting up a data transmission connection between a mobile terminal (MT1—MT4) and the first access point (AP1) for the transmission of information, and

— performing a handover, whereby a data transmission connection is set up between the second access point (AP2) and the mobile terminal (MT1—MT4),

characterized in that in the method, in connection with the handover, information is transmitted to the mobile terminal (MT1—MT4) about the encryption key selected at the second access point (AP2).

2. The method according to claim 1, **characterized** in that each encryption key in said set of encryption keys is allocated an encryption number (KI), wherein said encryption number (KI) is used as said data about the encryption key selected.

3. The method according to claim 1 or 2, in which information is transmitted in data frames (FR), **characterized** in that the encryption key is changed in connection with each data frame (FR).

4. The method according to claim 3, in which some of the data frames are used as common data frames for transmitting information from the second access point (AP2) to more than one mobile terminal (MT1—MT4), **characterized** in that said data about the encryption key is transmitted in another data frame than said common data frame.

5. The method according to any of the claims 1 to 4, **characterized** in that said set of encryption keys is stored in said access points (AP1, AP2) and in the mobile terminal (MT1—MT4).

6. The method according to any of the claims 1 to 5, **characterized** in that the mobile terminal (MT1—MT4) informs said second access point (AP2) about a need for handover, wherein said second access point (AP2) transmits information about the encryption key selected at the second access point (AP2) at the moment to the mobile terminal (MT1—MT4).

7. The method according to any of the claims 1 to 5, **characterized** in that the mobile terminal (MT1—MT4) informs said first access point (AP1) about a need for handover, that said first access point (AP1) transmits information about the handover to said second access point (AP2), wherein said second access point (AP2) transmits information about the encryption key selected at the second access point (AP2) at the time to the mobile terminal (MT1—MT4).

8. The method according to any of the claims 1 to 5, **characterized** in that the first access point (AP1) executes a forced handover, in which the mobile terminal (MT1—MT4) communicating with said first access point is transferred to communicate with said second access point (AP2), that said first access point (AP1) transmits information about the handover to said second access point (AP2), wherein said second access point (AP2) transmits information about the encryption key selected at the second access point (AP2) at the time to the mobile terminal (MT1—MT4).

9. A mobile communication system (1) comprising mobile terminals (MT1—MT4), at least a first access point (AP1) and a second access point (AP2); a set of encryption keys being defined in the communication system (1); the access point (AP1, AP2) comprising means for selected from said set of encryption keys one at a time to be used for encryption of information to be transmitted between said access point (AP1, AP2) and mobile terminal (MT1—MT4), and means for transmitting information about the encryption key selected at the time at intervals from the access point (AP1, AP2); the communication system (1)

also comprising means for setting up a data transmission connection between the mobile terminal (MT1—MT4) and the first access point (AP1) for the transmission of information, and means for executing a handover and setting up a data transmission connection between the second access point (AP2) and the mobile terminal (MT1—MT4), **characterized** in that the mobile communication system (1) also comprises means for transmitting information about the encryption key selected at the second access point (AP2) to the mobile terminal (MT1—MT4) in connection with the handover.

10. The mobile communication system (1) according to claim 9, **characterized** in that it also comprises means for defining an encryption number for each encryption key in said set of encryption keys (ST), wherein said encryption number (KI) is arranged to be used as said information about the encryption key selected.

11. The mobile communication system (1) according to claim 9 or 10, which comprises means for transmitting information in data frames (FR), **characterized** in that the encryption key is arranged to be changed in connection with each data frame (FR).

12. The mobile communication system (1) according to claim 11, in which some of the data frames are arranged to be used as common data frames for transmitting information from one access point (AP2) to more than one mobile terminal (MT1—MT4), **characterized** in that said data about the encryption key is arranged to be transmitted in another data frame than said common data frame.

13. The mobile communication system (1) according to any of the claims 9 to 12, **characterized** in that said set of encryption keys is stored at said access points (AP1, AP2) and mobile terminal (MT1—MT4).

14. The mobile communication system (1) according to any of the claims 9 to 13, **characterized** in that the mobile terminal (MT1—MT4) comprises means (8, 11, 30) for informing said second access point (AP2) about the need for a handover, wherein data is arranged to be transmitted from said second access point (AP2) to the mobile terminal

(MT1—MT4) about the encryption key selected at the second access point (AP2) at the time.

15. The mobile communication system (1) according to any of the claims 9 to 13, **characterized** in that the mobile terminal (MT1—MT4) comprises means (8, 11, 30) for informing said first access point (AP1) about the need for handover,

16. The mobile communication system (1) according to any of the claims 9 to 13, **characterized** in that the first access point (AP1) comprises means for performing a forced handover, wherein the mobile terminal (MT1—MT4) communicating with said first access point is arranged to be handed over to communicate with said second access point (AP2), and means for transmitting information about the handover to said second access point (AP2), wherein information about the encryption key selected at the second access point (AP2) at the time is arranged to be transmitted from said second access point (AP2) to the mobile terminal (MT1—MT4).